



# Klima og den nødvendige omstilling

*Jens Hesselbjerg Christensen*

*Niels Bohr Institutet, Københavns Universitet  
Danmarks Meteorologiske Institut  
NORCE Norwegian Research Centre AS, Bergen, Norge*

# Klima og den nødvendige omstilling



*Jens Hesselbjerg Christensen*

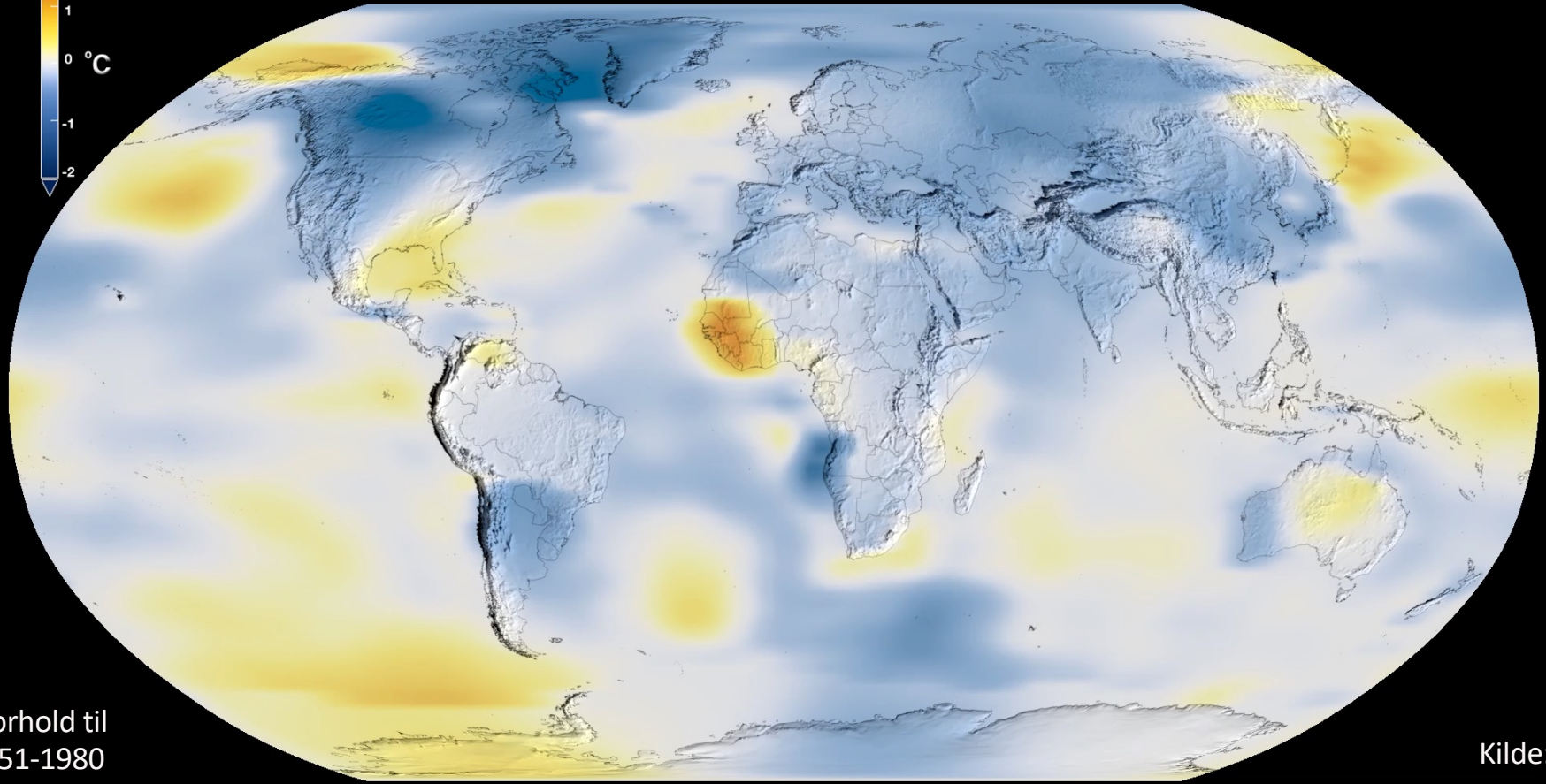
*Niels Bohr Institutet, Københavns Universitet*

*Danmarks Meteorologiske Institut*

*NORCE Norwegian Research Centre AS, Bergen, Norge*

# Der er sket store lokale variationer i temperaturændringerne

1880 - 1884



I forhold til  
1951-1980

Kilde: NASA

# SIXTH ASSESSMENT REPORT

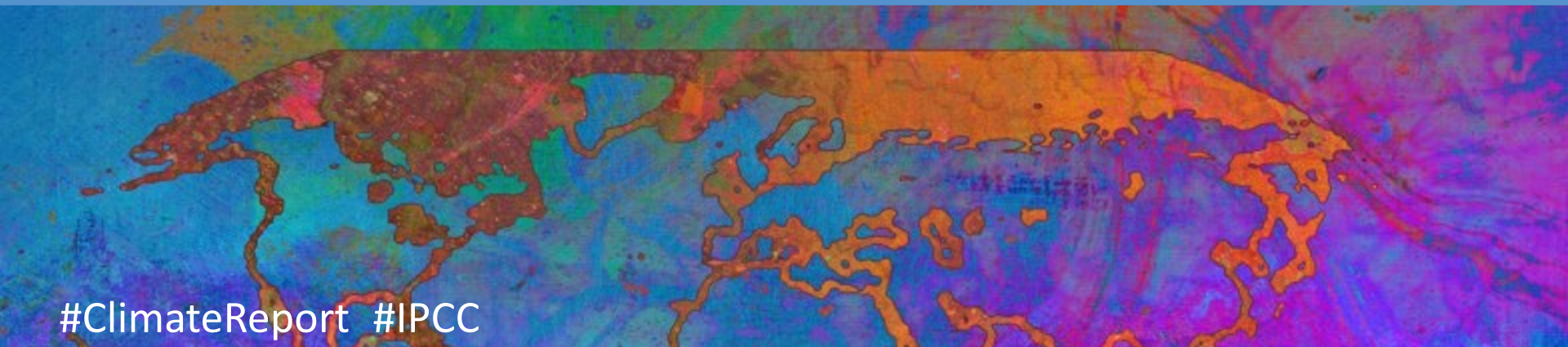
Working Group I – The Physical Science Basis

ipcc  
INTERGOVERNMENTAL PANEL ON climate change



9 August 2021

#ClimateReport #IPCC





[Credit: NASA]

“Recent changes in the climate are widespread, rapid, and intensifying, and unprecedented in thousands of years.



[Credit: Peter John Maridable | Unsplash]

“ Unless there are immediate, rapid, and large-scale reductions in greenhouse gas emissions, limiting warming to 1.5°C will be beyond reach.



[Credit: Yoda Adaman | Unsplash]

“ It is indisputable that human activities are causing climate change, making extreme climate events, including heat waves, heavy rainfall, and droughts, more frequent and severe.



[Credit: Hong Nguyen | Unsplash]

“ Climate change is already affecting every region on Earth, in multiple ways.

The changes we experience will increase with further warming.





[Credit: Shari Gearheard | NSIDC]

“ There’s no going back from some changes in the climate system. However, some changes could be slowed and others could be stopped by limiting warming.



[Credit: Evgeny Nelmin | Unsplash]



To limit global warming, strong, rapid, and sustained reductions in CO<sub>2</sub>, methane, and other greenhouse gases are necessary.

This would not only reduce the consequences of climate change but also improve air quality.

ipcc

INTERGOVERNMENTAL PANEL ON climate change

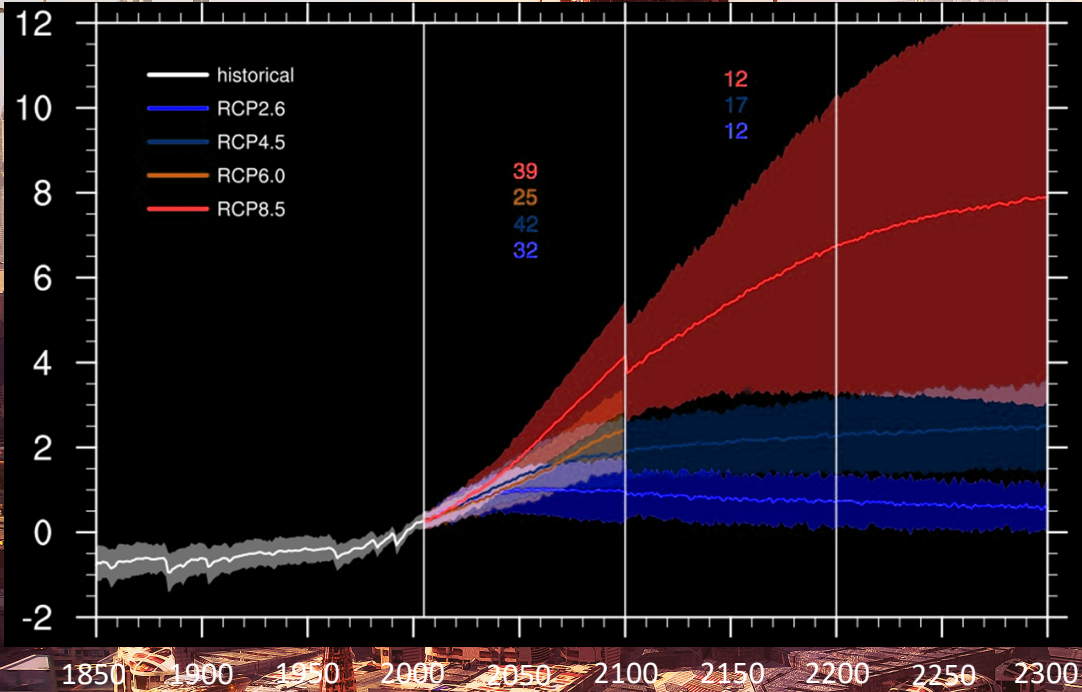


# Fremtidens klima



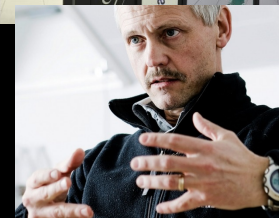
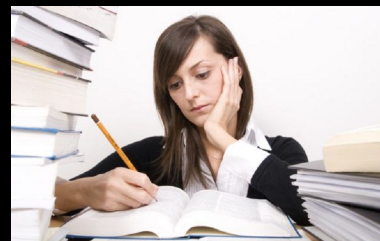
# Fremtidens klima

Ændring i global overflæde temperatur i °C



# Spørgsmål og perspektiver # 1

- Hvis dette er vigtigt, hvorfor bruger vi så ikke nogen flere midler til at forstå hvad der sker, så vi bedre kan forudsige fremtiden?
- Prisseksempler:
- 27 stk F35A til det danske forsvar (Ing.dk)  
indkøbspris: **20.000.000.000,- kr.**
- Manglende høstudbytte 2018 (dr.dk)  
opgjort tab: **4.100.000.000,- kr.**
- 1 stk Supercomputer til DMI 2015 (Borsen.dk)  
indkøbspris: **45.000.000,- kr.**
- 1 stk. superprofessor ved KU 2020  
årlig udgift: **1.000.000,- kr.**
- 1 stk. phd pr år **500.000,- kr.**

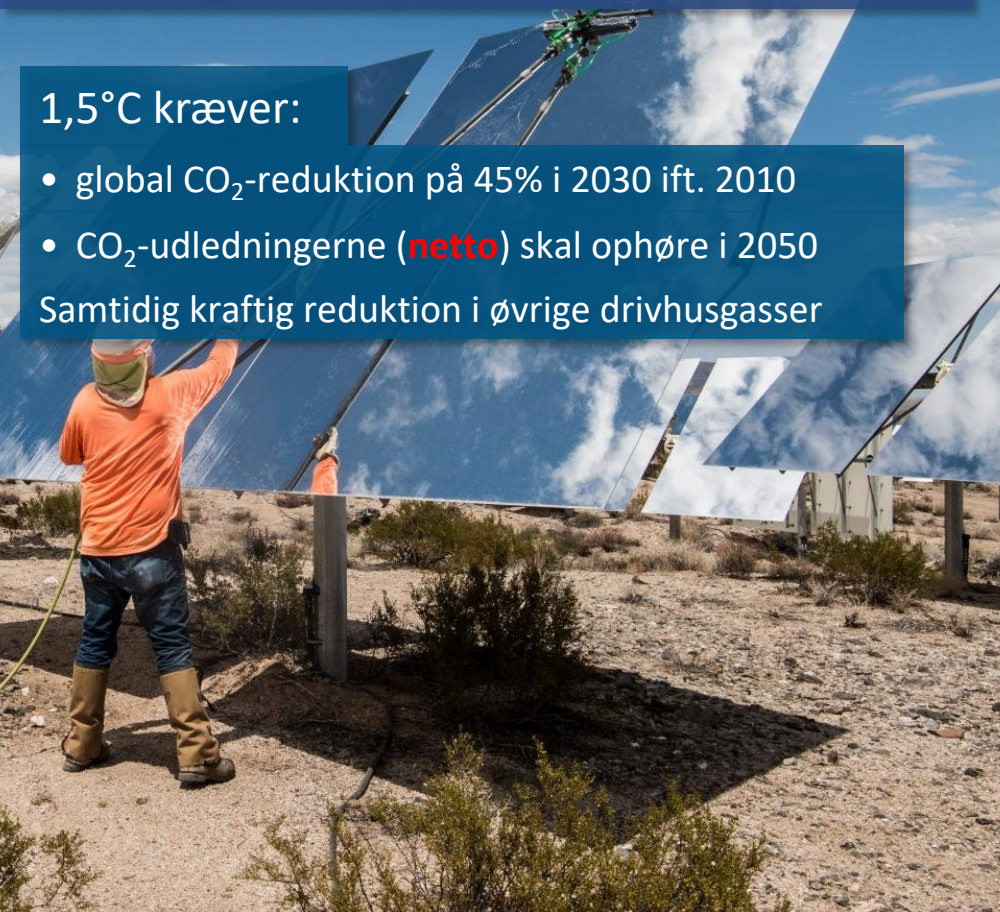


# Tiltag for at reducere udslip

1,5°C kræver:

- global CO<sub>2</sub>-reduktion på 45% i 2030 ift. 2010
- CO<sub>2</sub>-udledningerne (**netto**) skal ophøre i 2050

Samtidig kraftig reduktion i øvrige drivhusgasser



# Spørgsmål og perspektiver # 2

## Det kommende årti

- Hvem har brug for denne information?
- Kan klimaforskerne stille de rigtige spørgsmål?
- Kan vi forudsige klimahændelser i de kommende år? – og i givet fald hvad og med hvilken grad af sikkerhed?
- Skal vi ikke kende klimaeffekterne, for at ændre adfærd?